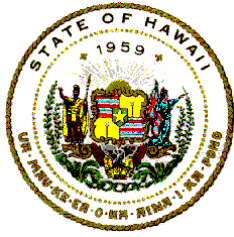


INFORMATION TECHNOLOGY STANDARDS OVERVIEW

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TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	NEED FOR STANDARDS.....	1
1.2	PURPOSE OF STANDARDS.....	2
1.3	BENEFITS OF STANDARDS.....	2
2	RESPONSIBILITY FOR STATEWIDE IT STANDARDS	4
3	DEVELOPMENT AND DISTRIBUTION OF STANDARDS	5
3.1	RESPONSIBILITIES FOR DEVELOPMENT AND MAINTENANCE.....	5
3.2	GROUND RULE FOR STANDARDS	5
3.3	FORMAT	6
3.4	DISTRIBUTION.....	6
3.5	DISCLOSURE OF STANDARDS.....	6
4	CONTROL AND AMMENDMENT OF PROCEDURES	6
4.1	RELEASE SCHEDULE.....	6
4.2	RULES FOR DISTRIBUTING UPDATES TO STANDARDS.....	6
5	CLARIFICATION AND INTERPRETATION OF STANDARDS	7
6	APPLICABILITY AND ENFORCEMENT OF STANDARDS	7
6.1	ENFORCEMENT OF STANDARDS.....	8



Information Technology Standards

1 INTRODUCTION

This is the Information Technology (IT) Standards Overview document within the State of Hawaii Information Technology Standards (IT Standards) developed by the Department of Accounting and General Services (DAGS), Information and Communication Services Division (ICSD). The IT Standards is a publication of the State of Hawaii, Executive Branch. It contains policies, responsibilities, procedures, guidelines, and conventions pertaining to computer assets under the operational control of DAGS.

1.1 Need for Standards

Policies, standards, methods, directives, guidelines and other uniform practices and procedures are found in varying levels of detail. They are the written guidelines that are necessary for the successful direction and functioning of any medium-to-large-scale organization. They enable management to convey its wishes over a long period of time to large numbers of organizations and individuals with whom it deals.

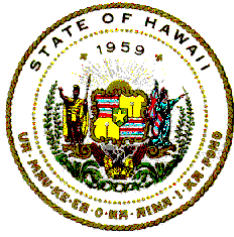
There are a number of reasons for establishing standards within the State's IT environment. The availability of computing power is on the increase and is being widely distributed. The use of computers has become a practical necessity for the processing of day-to-day work tasks. Standards facilitate communications between computers and make it easier for both the technical specialist and the lay user to use the computer as a tool for accomplishing tasks that need to be done.

Standards become extremely important for communications in the IT environment. Lack of standardization makes it difficult and at times impossible to effect the necessary communications linkages between computer software and applications.

While documentation is always acknowledged as crucial, it is also important to note that the better the documentation is, the smoother production processing will go. Poor documentation is one of the major problems confronting both users and managers. A manager is often frustrated because the staff does not receive good documentation from systems analysts to programmers to end-users and computer operations. Additional problems arise when programs are not properly documented. Maintenance and modification tasks can become far more difficult as a result. Good documentation:

Facilitates systems development by eliminating uncertainties about decisions made in planning or prior phases of development

- Provides a written record that can be used for design review.



Information Technology Standards

- Provides a description of systems components against which progress can be judged.
- Minimizes problems created by personnel absence.
- Provides the materials needed to install, operate, use, maintain, and modify a system.
- Provides the continuity necessary for fast, easy and seamless transfer of system responsibilities, including maintenance and enhancements.

Of necessity, there has been an increased emphasis on standards. Technology is making standards more widely available. Communication between various pieces of software is deemed essential by the user community. For this to happen, standards are the cornerstone. Documentation and computer usage is moving on-line using the computer and electronic media for the exchange of ideas, information, or applications for public access through the Internet or between employees of the State.

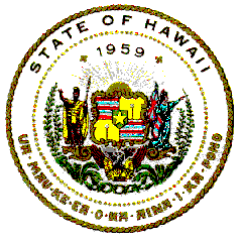
1.2 Purpose of Standards

Standards, practices and documentation represent important tools in the IT program. They can be used to coordinate the diverse activities of those working on the development of an applications system. They also help to ensure the transferability of applications and staff among various locations and provide implicit backup. While it is sometimes difficult to gain the enthusiastic support of the staff for these tools, they can greatly ease the task of managing the IT program.

Policies are established by all organizations to provide the basis for standards for operating in a uniform, predictable manner. They tend to minimize the ad-hoc decisions and reduce the potential for "crisis" decision making. Statements of policy are the means by which top management delegates the authority and responsibility to subordinate levels of management. Procedures explain the methods used to implement policies and specifically assign responsibilities within the organization. Existing policies should be reviewed periodically to ensure that they do not inhibit the direction of effective management.

1.3 Benefits of Standards

In general, standards and uniform practices afford several types of control that include coordination, flexibility, backup, and integration of new employees.



Information Technology Standards

- **Coordination.** As the number of computers within an organization increases, coordination becomes more difficult. Even if there are no telecommunications among sites, it is necessary to coordinate diverse information processing activities. The cost of developing software is too high not to consider the possibility of utilizing the same programs or applications in multiple locations. Standards and uniform practices make it easier to transport applications software from one location to another. In addition, coordination is extremely important in today's increasingly distributed environment.
- **Flexibility.** The ability to transfer individuals to different assignments is very important. Standards and uniform practices make it easier for an individual to move from one group, application, or location to another without the significant cost in time and funds required for retraining.
- **Backup.** When key personnel are unavailable, standard documentation helps provide backup. If programs are written in a specified format, it is easier for a programmer who is unfamiliar with an application to correct a program problem.
- **Integration of New Employees.** When new employees join the organization, well-defined standards and practices help them become productive more rapidly. It is possible for them to read and understand existing applications, programs, documentation, and other materials in a minimum amount of time.

It is especially important that new employees be given a complete orientation to agency procedures and those State IT policies, standards, and procedures that are likely to affect them. A new employee handbook designed for IT employees is a good idea. This handbook, which includes IT Standards, can be used as the textbook for orientation classes, to introduce new employees to office or installation practices, and help them get settled in the new environment. A well-designed handbook can boost the productivity of new employees and help them avoid fumbling with housekeeping chores and searching for applicable standards.

Other benefits that are derived from standards are:

- Reducing the possibility of employing a piecemeal, fragmented approach to establishing, developing, or implementing technology within any program.



Information Technology Standards

- Providing an organized structured description of the short-term and long-range direction of the State, incorporating management's viewpoint of IT and development within the State.
- Identifying and prioritizing the policies, procedures, standards, and guidelines that will be developed, published, and maintained to support the IT plans of the State.
- Providing a guideline for the major activities and deliverables needed for uniform statewide efficient and effective use of technology to enhance a program's ability to provide public services and access to information.
- Establishing procedures for the periodic review and revision of documentation to insure that it remains current and germane to the State's IT environment.

2 RESPONSIBILITY FOR STATEWIDE IT STANDARDS

IT Standards are published in accordance with Administrative Directive 77-2, Policy on Electronic Data Processing in the Hawaii State Government, which is currently in effect. However, the 1997 Legislature transferred authority for IT from the Director of Finance to the Comptroller with the transfer of the Information and Communications Services Division (ICSD) from the Department of Budget and Finance to the Department of Accounting and General Services (DAGS). Administrative Directive 77-2, 87-01, and all related mandates may be modified by State Administration at a future date. However, currently the Comptroller of DAGS is responsible for the establishment of "statewide data processing standards, guidelines and conventions that will enable uniformity and compatibility of edp systems under DAGS control." Accordingly, ICSD has been tasked to promulgate the necessary statewide IT standards to facilitate the administration, operation and management of the data processing and telecommunications throughout the Executive Branch of the Hawaii State Government.

The contents of the standards provide the administrative policies and procedures for the overall functioning of the IT program. The standards provide:

- An organized method for introducing and explaining policies and procedures.



Information Technology Standards

- A simple and concise training media for use by State agencies.
- A communication device that stores information near the point of use.
- An easy method to reduce the errors in decisions that would be due to ignorance at the operating level.

Because the standards are intended to serve as working documents, the standards should be available to any State employee who needs to interface with any IT activity.

3 DEVELOPMENT AND DISTRIBUTION OF STANDARDS

3.1 Responsibilities for Development and Maintenance

The Project Planning and Management Office (PPMO) of the ICSD is responsible for the format, publication, distribution, and filing of all standards and for coordinating the development and revision to standards. The development and writing of new IT standards or revising existing standards shall be done by designated personnel or a group who have an in-depth knowledge and understanding of the subject. The subject matter specialists may be from ICSD, other State agencies, or consultants, depending upon the subject. After the initial standards document has been developed, or revised, PPMO will assist subject matter specialists with the preparation, formatting, and organization of the standards. PPMO will also be responsible for the publication and distribution of the standards.

3.2 Ground Rule for Standards

- a. Any employee of the State may propose new standards.
- b. Any employee of the State may propose changes to existing standards.
- c. New or revised standards must be approved by the ICSD Administrator or whomever the Administrator designates.
- d. All standards are issued and distributed on CD ROM as the primary media. Upon request, standards may also be made available on 3.5" floppy diskette or as an email attachment.
- e. Access to standards on-line at the ICSD web site will be available so that every employee of the State may have access to them.



Information Technology Standards

- f. Each employee is expected to read and follow the series of standards pertaining to his or her job.
- g. The master copy of standards is maintained by PPMO along with a distribution list of persons/areas who received the electronic copy of the standards.

3.3 Format

Standards will be developed according to the Guidelines for Writing Standards. Examples or template documents are available upon request.

3.4 Distribution

One copy of the standards on CD ROM will be distributed to each Departmental DP Coordinator. The Departmental DP Coordinator is responsible for distributing all, or portions of the standards to individuals within his/her agency and for making electronic or hard copies as required to satisfy the agency's needs. The ICSD Administrator may limit the distribution of a standards document if it is in the best interests of the State.

3.5 Disclosure of Standards

The standards and vendor supplied manuals are for use by the employees of the Hawaii State Government. Requests for copies of the standards or vendor manuals from any other organization, private or governmental, should be made to the PPMO Chief for disposition. If the request is approved, permission will be given in writing.

4 CONTROL AND AMMENDMENT OF PROCEDURES

4.1 Release Schedule

All standards will be placed on a release schedule to ensure that they are reviewed so they may be kept current and appropriate. The frequency of the review will be based upon the volatility and technical developments of the topic in the State's IT environment. The release schedule will be published at the end of the fiscal year for the forthcoming fiscal year and will identify standards documents that will be reviewed in that year.

4.2 Rules for Distributing Updates to Standards



Information Technology Standards

When material to update a standard is distributed it will be done in the following manner:

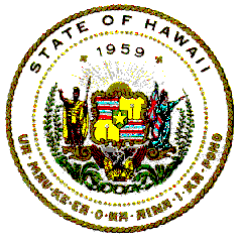
- a. The master copy of the updated standards will be copied in its entirety to a re-writable CD ROM and be known as the Standards CD ROM. It will include all existing standards that have been published, any new standards, and any revisions to existing standards.
- b. Determining the section(s) that have been modified may be done by consulting the Master Table of Contents. An asterisk (*) will be appended next to the standard number which is new or modified.
- c. Within a specific standards document, the modifications will be identified with a heavy vertical line in the left margin of the page.
- d. A new Standards CD ROM will be distributed to those identified on the distribution list maintained by PPMO.
- e. Upon receipt of a new release of the Standards CD ROM, the previous release of the Standards CD ROM is to be returned to PPMO.

5 CLARIFICATION AND INTERPRETATION OF STANDARDS

The standards are written with the intention that they be as clear as possible to the reader. However, what may be clear to the author and editors may not be clear to the reader. Contact PPMO for assistance if there is a question on the meaning or interpretation of a standard. PPMO will seek assistance from various resources within ICSD if it cannot provide a clear interpretation for the reader.

6 APPLICABILITY AND ENFORCEMENT OF STANDARDS

The standards are applicable to all State departments and agencies in the Executive Branch of the Hawaii State Government. Exceptions include the University of Hawaii for its administrative and academic related activities, and the Department of Education for its educational and instructional activities. Additional exceptions may be made for specific standard topics and, if made, will be noted in that standard.



Information Technology Standards

6.1 Enforcement of Standards

Following and enforcing the State of Hawaii's IT Standards is the responsibility of all supervisors and managers. Deviation from and exceptions to the standards may be requested in writing on a case-by-case basis from the ICSD Administrator or the Comptroller of DAGS.